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Another Account of the "Dance" of the Western Diamond Rattlesnake

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Through the kindness of F. W. Miller, director of the Dallas Museum of Natural History, I recently learned that E. E. Crater of Dallas had witnessed a "dance" of western diamond rattlesnakes (*Crotalus atrox* Baird and Girard) in Webb County, Texas last fall. In reply to my inquiry, Mr. Crater courteously supplied the following details.



Figure 1. *Crotalus atrox* in Webb County, Texas. Photo by courtesy of E. E. Crater.

On December 6, 1947, he and a party of seven on their annual deer hunt had nearly reached their camp site in the McFaden pasture, Callaghan Ranch, Webb County, Texas shortly past noon. The weather was warm and dry, the estimated temperature 85° F. As they passed a small clearing in the mesquite, something swaying back and forth in a peculiar rhythm attracted attention. Closer inspection revealed two large rattlesnakes, the lower halves

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of their bodies coiled together "in corkscrew fashion" and the upper halves in an upright position at a height of about 30 inches.

In Mr. Crater's words, "One snake would lower his body forward while the other would hold his upright, then the snake that lowered his body would rise up to the position of the other snake, letting their bodies touch, and the other snake would lower his body in the same manner. There was definitely a slow rhythm in the lowering and raising of their bodies. Occasionally when both snakes reached the upright position one would seem to run his head alongside the body of the other. All the time this was going on we also noticed a slight muscular action of the lower part of the body that was in the corkscrew position. This action was very slight and only after watching for several minutes did we realize that the position of this part of the snake was gradually changing all the time."

The observers walked within thirty feet of the snakes and watched "for quite some time." Mr. Crater then stepped into the open with a camera and snapped a picture. His presence did not disturb the snakes.

"Timing my walk and action with their rhythm," he writes, "I was able to get within five feet where I made my next picture (Figure 1). They paid no attention to me until I got within about eight feet. At this point both snakes came to their upright position, showing signs of nervousness and moving their heads in all directions. However, I still noticed the muscular action in the lower part of the body.

"After making this close-up we decided to kill them and go on to our camp work. I stepped back and one of the boys shot one snake just below the head and the snakes started separating their bodies. This seemed rather difficult, but the live snake was able finally to squirm loose and then make a rapid retreat for a pack-rat den close by. This one was wounded just before entering the den."

When I reported other second-hand observations on a "dance" performance in *Agkistrodon mokeson mokeson* and *Crotalus viridis viridis* last year (Lloyd, 1947), I uncritically followed previous writers in assuming that the "dance" is a part of courtship and mating behavior. Subsequently it has been reasonably advanced by Lowe (1948) and by Shaw (1948) that the so-called dance is not related to courtship and mating but is a "territorial fight" or "combat dance" between two males. Each of these authors has made a strong case for such an interpretation. It is not my purpose here to indulge in criticism or speculation. I record Mr. Crater's notes on *Crotalus atrox* for what they are worth, and to keep the subject warm. Here is another case in which the sexes of the two snakes were not determined and there are several points on

which more prolonged observation might have helped. For example, was the "muscular action in the lower part of the body" an attempt at copulation?

In general it will be noted that the behavior of these snakes resembled the wrestling matches described by Shaw (*op. cit.*) in captive *Crotalus ruber* except that there is no indication that the *atrox* faced each other and forcefully pushed against one another. In a much blurred photograph, also sent by Mr. Crater to show one snake lowering his body while the other held his upright, both are facing in the same direction. Lowe (*op. cit.*, p. 134) has succinctly stated what is needed: ".... observation and experiment both in the field and in the laboratory, to establish beyond reasonable doubt the true nature and evolutionary significance of the behavior involved."

Literature Cited

Gloyd, Howard K.

- 1947 Notes on the courtship and mating behavior of certain snakes. Chicago Acad. Sci., Nat. Hist. Misc., no. 12, p. 1-4.

Lowe, Charles H., Jr.

- 1948 Territorial behavior in snakes and the so-called courtship dance. *Herpetologica*, vol. 4, pt. 4, p. 129-135.

Shaw, Charles E.

- 1948 The male combat "dance" of some crotalid snakes. *Ibid.*, p. 137445, fig. 1-8.

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